

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	75	(substrate or substrates) same (polyphenylene adj3 polyimide)	USPAT ; US-PG PUB; EPO; JPO; DERWE NT; IBM_T DB	2002/10/23 13:05
2	BRS	L2	3	(substrate adj10 (polyphenylene adj polyimide))	USPAT ; US-PG PUB; EPO; JPO; DERWE NT; IBM_T DB	2002/10/23 13:14
3	BRS	L3	10	polyphenylene adj polyimide	USPAT ; US-PG PUB; EPO; JPO; DERWE NT; IBM_T DB	2002/10/23 13:30
4	BRS	L4	1137	biphenyl adj10 tetracarboxylic	USPAT ; US-PG PUB; EPO; JPO; DERWE NT; IBM_T DB	2002/10/23 13:31
5	BRS	L5	1	4 same (polyphenylene adj polyimide)	USPAT ; US-PG PUB; EPO; JPO; DERWE NT; IBM_T DB	2002/10/23 13:31

	Type	L #	Hits	Search Text	DBs	Time Stamp
6	BRS	L6	43	4 and polyphenylene	USPAT; US-PG PUB; EPO; JPO; DERWE NT; IBM_T DB	2002/10/23 13:39
7	BRS	L7	0	polyphenylene adj polyimide	USOCR	2002/10/23 13:45
8	BRS	L8	198	polyphenylene adj3 polyimide	US-PG PUB; EPO; JPO; DERWE NT; IBM_T DB	2002/10/23 14:11
9	BRS	L9	1	8 same (biphenyl adj3 tetracarboxylic adj3 acid)	US-PG PUB; EPO; JPO; DERWE NT; IBM_T DB	2002/10/23 14:11
10	BRS	L10	20	(biphenyl adj3 tetracarboxylic adj3 acid) same (substrate or substrates or wafer or wafers)	US-PG PUB; EPO; JPO; DERWE NT; IBM_T DB	2002/10/23 14:27
11	IS&R	L11	379	(438/149).CCLS.	USPAT	2002/10/23 15:11
12	IS&R	L12	201	(438/155).CCLS.	USPAT	2002/10/23 15:11

DERWENT-ACC-NO: 1988-215110
DERWENT-WEEK: 198831
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TITLE: Prodn. of flexible printed circuit substrate - by
preparing polyamic
acid, applying onto metal foil surface, heating, winding
foil around cylinder
and heating

PATENT-ASSIGNEE: SUMITOMO BAKELITE CO[SUMB]

PRIORITY-DATA: 1986JP-0227168 (September 27, 1986)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
PAGES	MAIN-IPC	
JP 63084089 A	April 14, 1988	N/A
007	N/A	
JP 94082894 B2	October 19, 1994	N/A
006	H05K 001/03	

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP63084089A	N/A	1986JP-0227168
September 27, 1986		
JP94082894B2	N/A	1986JP-0227168
September 27, 1986		
JP94082894B2	Based on	JP63084089
N/A		

INT-CL (IPC): B05D007/24; B32B015/08 ; H05K001/03

ABSTRACTED-PUB-NO: JP63084089A

BASIC-ABSTRACT: Flexible printed circuit substrate is
produced by (1) preparing
polyamic acid from (A) 90-100 molar pts. of acid component
consisting of (a)
50-80 mole% of 3,3',4,4'-biphenyl tetracarboxylic acid
dianhydride and (b)
50-20mole% of pyromellitic acid dianhydride and (B) 100
molar pts. of diamine
component consisting of (c) 50-80 mole% of paraphenylene
diamine and (d) 50-20

mole% of 4,4'-diaminodiphenyl ether at first by a reaction of the cpd. (a) and cpd. (c), and then by addn. of cpd. (b) and cpd. (d) into the reaction prod. to obtain polyamic acid; (2) applying polyamic acid onto surface of a metal foil; (3) heating from 100 deg.C to 300 deg.C in at least 0.5 hr.; (4) winding the ~~foil~~ around a cylinder of dia. 50-100mm so that the metal layer of the foil contacts with the cylinder; and then (5) heating from 300-350 deg.C in at least 0.5 hr..

USE/ADVANTAGE - The flexible printed circuit substrate has excellent heat resistance, cold resistance, mechanical property, electric property, wear resistance, chemical resistance and curling resistance.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS:

PRODUCE FLEXIBLE PRINT CIRCUIT SUBSTRATE PREPARATION
POLYAMIDEACID ACID APPLY
METAL FOIL SURFACE HEAT WIND FOIL CYLINDER HEAT

DERWENT-CLASS: A32 L03 M13 P42 P73 V04

CPI-CODES: A05-J01B; A12-E07A; L03-H04E1; M13-H01;

EPI-CODES: V04-R07;

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0004 0016 0020 0038 0229 0230 0231 1285 1485
1487 3111 3115 2148
2152 2155 3224 2413 2439 2548 2600 2604 2607 2628 2629 2657
2728 2740

Multipunch Codes: 014 03- 038 04& 04- 106 141 151 16& 163
168 206 27- 331 344
346 357 388 428 431 47& 477 506 541 542 545 551 56& 560 566
567 58& 597 598 623
627 628 684 724 725

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1988-095837

Non-CPI Secondary Accession Numbers: N1988-163939

DERWENT-ACC-NO: 1989-238273
DERWENT-WEEK: 198933
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TITLE: Substrate for flexible printed circuit board -
comprising bi:phenol
tetra:carboxylic acid di:anhydride and pyromellitic acid
di:anhydride, and
di:amine component, etc.

PATENT-ASSIGNEE: SUMITOMO BAKELITE CO[SUMB]

PRIORITY-DATA: 1987JP-0329551 (December 28, 1987)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
PAGES	MAIN-IPC	
JP 01173687 A	July 10, 1989	N/A
004	N/A	

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP01173687A	N/A	1987JP-0329551
December 28, 1987		

INT-CL (IPC): B32B015/08; H05K001/03

ABSTRACTED-PUB-NO: JP01173687A

BASIC-ABSTRACT: The tetracarboxylic acid dianhydride component of the substrate consists of 3,3',4,4'-biphenyl tetracarboxylic acid dianhydride, 50-80 mols.%, and pyromellitic acid dianhydride, 50-20 mols.%. The diamine component consists of paraphenylene diamine, 50-80 mols.% and 4,4'-diaminophenyl ether, 50-20 mols.%. The tetracarboxylic acid dianhydride component is reacted with the diamine component to obtain a polyamic acid soln, which is applied to one face of a copper foil and heated to obtain a laminated polyamide face. An adhesive compsn. formed by adding a multifunctional aziridine cpd. to a resin

compsn. is applied to the polyamide face. The resin
compsn. consists of a
terminal carboxylic acid polyester resin comps., 30-95
wt.% and polyether
imide, 70-5 wt.% of the formula (I). The terminal
carboxylic acid polyester
resin comps. is obt'd. by reacting an acid and an alcohol
component. The acid
component consists of terephthalic acid, 40-95 mols.%,
isophthalic acid and/or
4-10C aliphatic dicarboxylic acid, 60-5 mols.%. The
alcohol component consists
of ethylene glycol, 30-95 mols.%, tetramethylene glycol
and/or polytetramethy
lene glycol, 70-5 mols.%. The applied faces or the applied
faces and the
laminated polyimide face are pasted.

USE/ADVANTAGE - The substrate exists no adhesive layer
between the copper foil
circuit layer and the polyimide layer. No adhesive layer
provides the
substrate with heat resistance, freezing resistance,
humidity resistance
insulation, and high freq. characteristics.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS:

SUBSTRATE FLEXIBLE PRINT CIRCUIT BOARD COMPRISE BI PHENOL
TETRA CARBOXYLIC ACID
DI ANHYDRIDE PYROMELLITIC ACID DI ANHYDRIDE DI AMINE
COMPONENT

ADDL-INDEXING-TERMS:

PCB COPPER@ PARA PHENYLENE DI AMINO PHENYL ETHER

DERWENT-CLASS: A28 A85 G03 L03 P73 V04

CPI-CODES: A05-J01B; A08-M01; A12-E07A; G02-A05B;
L03-H04E1;

EPI-CODES: V04-R07;

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0004 0010 0016 0020 0037 0038 0231 1279 1285
1291 1319 1323 1447

1450 1452 1454 1458 1462 1485 1487 1715 3111 3115 2020 2148
2149 2150 2152 2155
2297 2427 2432 2437 2439 2488 2549 3251 2600 2609 2617 2628
2670 2682 2726 2728
2740 3279

Multipunch Codes: 014 032 035 038 04- 075 106 141 143 144

147 151 155 157 159

16& 160 161 162 163 164 166 168 169 170 171 173 206 231 239

27- 273 331 341 343

344 346 351 357 398 431 438 443 446 47& 473 477 504 506 507

53& 532 533 535 541

549 551 556 56& 560 566 58& 582 609 623 627 628 684 721 724
725

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1989-106419

Non-CPI Secondary Accession Numbers: N1989-181361